BRUHAT BANAGLORE MAHANAGARA PALIKE

Executive Engineer -yelahanka Division

Detailed Estimate

Name of the Work — **Asphalting to Roads and improvements to drains in B sector of ward no.04**

Estimate Amount : 3000000.00

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
	CIVIL WORKS								
1	KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3								
	(Page No142., I.No.19.1 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*82.00*							
	Area Wieght age @ 6%	*4.92*							
	Total Rate in Rs	*86.92*							
	New drain								
	4th B cross road from 1st A main road to 6th B main road								
	LHS								
	Ch: (0 - 47)		1	47	1.20	0.800	45.12		
	Ch: (54 - 105)		1	51	1.20	0.800	48.96		
	Ch: (111 - 160)		1	49	1.20	0.800	47.04		
	RHS								
	Ch: (0 - 160)		1	160	1.20	0.800	153.60		
							294.72	**86.92**	**25617.06**
2	KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix1:3 6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregtes @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted,in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications Specification No. KBS 4.1, 4.2								
	(Page No 12., I.No.4.2 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*5046.00*							
	Area Wieght age @ 6%	*302.76*							
	Total Rate in Rs	*5348.76*							
	New drain								
	4th B cross road from 1st A main road to 6th B main road								
	LHS								
	Ch: (0 - 47)		1	47	0.90	0.100	4.23		
	Ch: (54 - 105)		1	51	0.90	0.100	4.59		
	Ch: (111 - 160)		1	49	0.90	0.100	4.41		
	RHS								
	Ch: (0 - 160)		1	160	0.90	0.100	14.40		
							27.63	**5348.76**	**147786.24**
3	Providing and laying Plain /reinforced cement concrete for side drains wall and bottom thickness 15cm using M20 nominal mix concrete with OPC cement at 300kg with 20mm and down size granite metal coarse aggregate at 0.69 cum and fine aggregate at 0.43 cum machine mixed well compacted for walls at bottom including centring shuttering cost of materials HOM of machineries curing etc.completeexcluding cost of steel as per MORTH specification No.1500,1700,2200								
	(Page No265., I.No.37.59.2 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*10408.00*							
	Area Wieght age @ 6%	*624.48*							
	Total Rate in Rs	*11032.48*							
	New drain								

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
	Raft								
	4th B cross road from 1st A main road to 6th B main road								
	LHS								
	Ch: (0 - 47)		1	47	0.90	0.125	5.29		
	Ch: (54 - 105)		1	51	0.90	0.125	5.74		
	Ch: (111 - 160)		1	49	0.90	0.125	5.51		
	RHS								
	Ch: (0 - 160)		1	160	0.90	0.125	18.00		
	Wall								
	4th B cross road from 1st A main road to 6th B main road								
	LHS								
	Ch: (0 - 47)		2	47	0.125	0.650	7.64		
	Ch: (54 - 105)		2	51	0.125	0.650	8.29		
	Ch: (111 - 160)		2	49	0.125	0.650	7.96		
	RHS								
	Ch: (0 - 160)		2	160	0.125	0.650	26.00		
							84.43	**11032.48**	**931417.12**
4	KSRB 4 9 2 Providing T M T steel reinforcement for R C C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4 6 3 for TMT Bars Fe500								
	(Page No 17., I.No.4.46.2 of KPWD S.R 2016-17).								
		Tonne							
	Basic rate	*56050.00*							
	Area Wieght age @ 6%	*3363.00*							
	Total Rate in Rs	*59413.00*							
	New drain								
	Taking 65kg/cum						5.49		
							5.49	**59413.00**	**326036.26**
5	Providing precast slab of 100 mm thick including cost of all materials, labour, curing,transportation,loading ,unloading,etc ,complete as per the direction of engineer in charge-								
	Data rate								
		Sqm							
	Total Rate in Rs	*1757.00*							
	Damaged and missing slab						180.00		
							180.00	**1757.00**	**316260.00**
	Sub total-1								**1747116.68**
	ROAD WORKS								
6	KSRRB M300-14 Excavation for roadwork in all type of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301								
	(Page No 143., I.No.19.14 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*46.00*							
	Area Wieght age @ 6%	*2.76*							
	Total Rate in Rs	*48.76*							
	Widening Portion								
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		2	160	1.50	0.300	144.00		
							144.00	**48.76**	**7021.44**

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
7	KSRRB M400-6.1. Construction of granular sub-base by providing close graded material, crushed stone aggregates of granite/trap/basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method Close graded granular sub-base material as per 400-1 For Grading- II Material **(Page No 155., I.No.20.5.2 of KPWD S.R 2016-17).**								
		Cum.							
	Basic rate	*1571.00*							
	Area Wieght age @ 6%	*94.26*							
	Total Rate in Rs	*1665.26*							
	Widening Portion								
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		2	160	1.50	0.150	72.00		
							72.00	**1665.26**	**119898.72**
8	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite/trap/basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 **(Page No 158., I.No.20.18 of KPWD S.R 2016-17).**								
		Cum.							
	Basic rate	*1668.00*							
	Area Wieght age @ 6%	*100.08*							
	Total Rate in Rs	*1768.08*							
	Widening Portion								
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		2	160	1.50	0.200	96.00		
							96.00	**1768.08**	**169735.68**
9	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WBM,WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 **(Page No 161., I.No.21.6 of KPWD S.R 2016-17).**								
		Sqm							
	Basic rate	*26.00*							
	Area Wieght age @ 6%	*1.56*							
	Total Rate in Rs	*27.56*							
	Widening Portion								
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		2	160	1.50		480.00		
							480.00	**27.56**	**13228.80**
10	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH / Chapter 5 **(Page No 161., I.No.21.2 of KPWD S.R 2016-17).**								
		Sqm							
	Basic rate	*3.00*							
	Area Wieght age @ 6%	*0.18*							
	Total Rate in Rs	*3.18*							
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		1	160	4.50		720.00		
							720.00	**3.18**	**2289.60**

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
11	KSRRB 500-7 Providing and applying tack coat using 80/100 grade Bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm , heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5								
	(Page No 161., I.No.21.7 of KPWD S.R 2016-17).								
		Sqm							
	Basic rate	*11.00*							
	Area Wieght age @ 6%	*0.66*							
	Total Rate in Rs	*11.66*							
	4th B cross road from 1st A main road to 6th B main road								
	Ch. (0 - 160)		1	160	7.50		1200.00		
							1200.00	**11.66**	**13992.00**
12	KSRRB M500- 17 Providing, laying dense graded bituminous macadam using 40/60 TPH capacity H M P with Mechanical paver Gr-II(50mm to 75mm), crushed aggregates of specified grading premixed with 4.5% VG 30 grade bituminous binder and filler, transporting the hot mix to work site , laying to the required grade,level and alignment, rolling with wheeled , vibratory and tandeem rollers to achieve the desired compaction as per MORTH Table-500-10 including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No 507								
	(Page No 163., I.No.21.17.6 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*6071.00*							
	Area Wieght age @ 6%	*364.26*							
	Total Rate in Rs	*6435.26*							
	Profile correction								
			1	48		0.050	2.40		
	Widening Portion								
	4th B cross road from 1st A main road to 6th B main road								
	Ch. (0 - 160)		2	160	1.50	0.050	24.00		
							26.40	**6435.26**	**169890.86**
13	KSRRB M500- 19 Providing, laying bituminousConcrete using 40/60 TPH capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 5.4% VG 30 grade bituminous binder and filler , transporting the hot mix to work site , laying to the required grade,level and alignment, rolling with wheeled , vibratory and tandeem rollers to achieve the desired compaction as per MORTH Table-500.9 including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509								
	(Page No 165., I.No.21.22.6 of KPWD S.R 2016-17).								
		Cum.							
	Basic rate	*6859.00*							
	Area Wieght age @ 6%	*411.54*							
	Total Rate in Rs	*7270.54*							
	4th B cross road from 1st A main road to 6th B main road								
	Ch. (0 - 160)		1	160	7.50	0.040	48.00		
							48.00	**7270.54**	**348985.92**

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
14	Lead for disposal of earth shall be payable at Carriage rates (Lead & Lift) by mechanical means including loading and unloading up to 4kms. **(Refer Table. Page No.140)**								
	Basic rate	**Cum.**							
	Total Rate in Rs	**80.80**							
				For item no	1		294.72		
							294.72	**80.80**	**23813.38**
				Sub total-1					**868856.40**
	ROAD FURNITURES								
15	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 (Page No 185, I No.24.15 of KPWD S.R 2016-17).								
		Sqm							
	Basic rate	**512.00**							
	Area Wieght age @ 6%	**30.72**							
	Total Rate in Rs	**542.72**							
	Road Marking								
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		2	5	160	0.10	40.00		
							40.00	**542.72**	**21708.80**
16	KSRRB M800-35. Supply and installtion of moulded Shank Raised Pavement Markers made of polycarbonate and ABS (Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 - DO III Dt 11.06.1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 sqcm on each side and the slope to the base shall be 35 degree. The srength of detachment of the integrated cylindrical shanks, (of diameter not less than 19mm and height not less than 30mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer with 2 years warranty for the reflectivity from the original manufacturer is mandatory along with necessory test certification from the certified laboratory. Third party test certificates from a reputed test laboratory shall be submitted with seal and Signature in Originals. (Page No 189., I No.24.41 of KPWD S.R 2016-17).								
		No.							
	Basic rate	**339.00**							
	Area Wieght age @ 6%	**20.34**							
	Total Rate in Rs	**359.34**							
	4th B cross road from 1st A main road to 6th B main road								
	Ch: (0 - 160)		1		160		160.00		
							160.00		
	Spacing @6mc/c	edge					54.00		

Sl. No.	Description of item	Unit	Nos	Dimension			Total Qty	Rate in Rs	Amount in Rs
				L in m	B in m	D in m			
	Spacing @9mc/c	centre					18.00		
							72.00	359.34	25872.48
	Sub Total-3								47581.28
	Total								2663554.36
17	Cost towards Preperation of DPR,PMC/QC @ 2%								79906.63
18	**Cost of Plastic@ 8% of bitumen qty for BC**	**Kg**	1	541.44				27.00	14618.88
19	**Cost towards KIRDL Charges @ 8% and labour cess @1%**								239719.89
20	Miscllenous and other charges								2200.23
								Grand Total	3000000.00

Certificate:-

1. That the workspot has been inspected and provisions made in the estimate are adequate and necessary
2. Work spot comes with in the Bruhat Bangalore Mahanagara Palike Limits.
3. That estimate is based on the PWD SR of 2016-17
4. The work is not split up
5. These works are not taken up in any grants and free from defect liability period
6. Earlier improvements taken up in the proposed roads are recorded in road history

Consultant:
For M/s Mecade2 core technologies pvt ltd

Mecade2 Core Technologies Pvt. Ltd. MECADE2

Asst. Engineer
Ward No:4
BBMP

AEE
yelahanka Sub division
BBMP

Executive Engineer
yelahanka division
BBMP

Administrative Approval
Accorded For 30.00 lakhs.
Head of A/C P.3089
CER NO : 235A Dt: 24.3.17

TA CE (YNK)

Technical Sanction
Accorded For 30.00 lakhs
Head of A/C P.3089
CER NO : 193 Dt: 24.3.17

TA CE (YNK)